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## Health care, information needs, and outreach: reaching Ohio's rural citizens

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As a rural state, Ohio has a vital interest in addressing rural health and information needs. NetWellness is a Web-based consumer health information service that focuses on the needs of the residents of Ohio. Health sciences faculty from the state's three Carnegie Research I universities—University of Cincinnati, Case Western Reserve University, and The Ohio State University—create and evaluate content and provide Ask an Expert service to all visitors. Through partnerships at the state and local levels, involving public, private, commercial, and noncommercial organizations, NetWellness has grown from a regional demonstration project in 1995 to a key statewide service. Collaboration with public libraries, complemented by alliances with kindergarten through twelfth grade agencies, makes NetWellness Ohio's essential health information resource.

## INTRODUCTION

Outside of several large metropolitan areas, Ohio is largely rural from the Appalachian plateau in the southeast to the rich agricultural communities of the northwest. Accordingly, Ohio has a vested interest in—and history of—addressing rural health care and information needs. Examples include the Ohio Department of Health's numerous care and assessment programs targeted to rural residents, telemedicine projects connecting academic medical centers with rural practitioners, and legislation recently passed into law that makes automated external defibrillators more readily available in public and commercial settings throughout the state.\* This paper focuses on one such outreach project, NetWellness.

## WHAT IS NETWELLNESS?

NetWellness is a Web-based consumer health information service that began in 1994 as the Ohio Valley Community Health Information Network, a collaborative project of the University of Cincinnati Medical Center and more than forty contributing partners. It has grown into a statewide program, serving Ohio citizens through every public library in the state, as well as visitors from around the world. Health sciences faculty from University of Cincinnati, Case Western Reserve University, and The Ohio State University—the state's three Carnegie Research I Universities—create and evaluate consumer health content for the site and staff its Ask an Expert service, where consumers can ask questions and view responses directly on the Web.

NetWellness began as a regional demonstration project in collaboration with other community information providers [1, 2]. The project was funded in part by the Technology and Information Infrastructure As-

sistance Program (TIAP) of the U.S. Department of Commerce National Telecommunications and Information Administration (NTIA). NTIA's \$375,000 TIAP grant was matched and exceeded by more than \$800,000 in contributions from NetWellness partners, including \$300,000 from the State of Ohio. NetWellness also received grant support from the U.S. Public Health Service National Action Plan on Breast Cancer, coordinated by the Office of Women's Health and the National Cancer Institute (NCI) with NCI funding.

As originally established, NetWellness sought to:

1. provide easy, equitable, and widespread access to health-related information resources to the general public in the Ohio Valley region, particularly rural Appalachian and urban minority populations;
2. provide comprehensive training programs for these health information resources by working with community and regional partners;
3. use the existing telecommunications infrastructure to extend health information resources to as many citizens of the Ohio Valley Region as possible;
4. contribute to extending the information superhighway to all citizens of the Ohio Valley Region; and,
5. in an era of health care reform when patients participate more in their own care, contribute to the health education and awareness of citizens of the Ohio Valley.

The demonstration project's dual focus on underserved rural and urban populations reflects the University of Cincinnati Medical Center's (UCMC) outreach commitments. Besides serving its own urban and inner-city communities, UCMC operates HEALTH-UC, the region's Area Health Education Center, in one of southern Ohio's Appalachian counties. This dual focus is even more pronounced today with the added urban focus of Case Western Reserve University, the rural outreach of The Ohio State University, and the geographically comprehensive nature of Ohio's library networks—Ohio Public Library Information Network (OPLIN), Information Network for Ohio Schools (INFOhio), and Ohio's academic library

\* Sec. 2305.235 Ohio Revised Code, 147 v H 717. Effective December 17, 1998. Sponsored by Rep. R. Vesper (R-72nd Dist.) et al.

network (OhioLINK)—through which NetWellness is now delivered to Ohio's residents.

The U.S. Appalachian Regional Commission funded the Health Care Information Connection (HCIC), an antecedent to NetWellness, to deliver database and information support to health professionals in three Ohio Appalachian counties. This project helped UCMC pave the way for NetWellness by establishing the value of train-the-trainer approaches to support remote users; identifying the need for authoritative, convenient, and easy-to-use information resources; and identifying the need for not only professional-oriented health information but also consumer-oriented materials.

During its demonstration grant period (October 1994–June 1997), NetWellness placed forty-three public-access computers in community centers, senior centers, clinics, hospital waiting rooms, pharmacies, and other community locations throughout Greater Cincinnati and southern Ohio. These computers used a variety of available telecommunications technologies, including dial-up service, integrated services digital network (ISDN) connections, and institutional intranet or Internet connections. Regional free-nets provided free dial-in connections to many of the NetWellness' resources for those with less capable equipment or communications links.

At about the same time, University of Cincinnati Medical Center Libraries began a closer relationship with the university's Medical Computing Services. The two organizations eventually merged into one department, headed by the assistant senior vice president, Medical Center Academic Information Technology and Libraries (AIT&L). This close association and merger allowed AIT&L to drive library and information-technology projects forward with a synergy not previously possible. Libraries and information technology organizations frequently have different cultures and service ethics. As it has grown, NetWellness has been an important test bed for AIT&L to blend those two cultures to create a dynamic, leading-edge information service.

Ohio had a long history of library-resource sharing. Online Computer Library Center (OCLC), while not affiliated with NetWellness, was an early example of Ohio's vision for shared information services. State-funded projects ranged from the state's academic library network, OhioLINK, through the public library network, OPLIN, to the kindergarten through twelfth grade (K–12) school library network, INFOhio. NetWellness moved through several phases of growth to become a statewide, and worldwide, consumer health information resource [3, 4]. Following the federal demonstration grant (July 1997–present), the State of Ohio funded NetWellness to expand statewide and to add the expertise of Case Western Reserve University and The Ohio State University along with library

partners, the State Library of Ohio, OPLIN, INFOhio, and OhioLINK. OPLIN was already pursuing an aggressive program to establish networked information services to all 250 public library systems in the state. OPLIN utilizes T1 (1.5 Mbps) communications links through the Ohio Department of Administrative Services (DAS).

The mission of DAS Telecommunications is to promote efficient and responsive state government services to the citizens of Ohio through the application of communication technology. DAS Telecommunications manages the State of Ohio Synchronous Optical Network (SONET), a shared infrastructure serving data, voice, and video telecommunications needs. DAS began building Ohio's SONET infrastructure in 1996, and it is now the largest and most comprehensive state network project in the country. The network is designed to leverage the needs of all users and applications, regardless of location. SONET's customers have equal access to state, national, and global information resources at fixed, lower costs. Through a ten-year contract with Ameritech and Ohio's telephone companies, telecommunication costs are "postalized" for all agencies connected to the State of Ohio Network, including the most remote rural areas. A postalized or flat rate eliminates wide variation in cost for remote customers versus nearby customers. This negotiated rate also serves Ohio's K–12 facilities, and the state plans to connect all public and private K–12 school buildings (more than 4,600) to the state network. By taking advantage of OPLIN's experience in utilizing DAS's infrastructure to develop a statewide public access library network, NetWellness has been able to focus on content development. NetWellness has negotiated large-volume database licenses so Ohio's citizens, including those in even the most underpopulated areas of the state, could access NetWellness' proprietary databases (such as Gale's Health Reference Center) from all of Ohio's 700 public library buildings.

## WHOM DOES NETWELLNESS SERVE?

NetWellness receives funding primarily from the State of Ohio to provide its services to Ohio's citizens. While its OPLIN connection makes NetWellness available conveniently for the 7.6 million Ohio residents who regularly use public libraries, visitors from all fifty states and more than fifty countries contribute to NetWellness' average 1.3 million monthly hits. NetWellness seeks support to extend access to its proprietary licensed databases into the state's K–12 schools through INFOhio and academic libraries through OhioLINK. Meanwhile, the OPLIN connection ensures that, regardless of socioeconomic status, geography, or the availability of consumer access to reliable telecommunications links, Ohio residents can visit their nearest public library to reach all of NetWellness' resource

es. Soon, dial-access from home for public library cardholders throughout the state will extend NetWellness' services.

OPLIN provides physical access both to rural Ohio residents who live in areas that are otherwise underserved by Internet service providers (ISPs) and to those who may live in well-served urban communities, but who are unable to afford home computers and Internet access. The Ohio State University's Prior Health Sciences Library provides support to affiliated rural hospitals. Many of these institutions are small facilities with ten to fifty beds. Although their administrators have a strong interest in library services, the hospitals cannot alone manage the demand for consumer health information from patients and families. In evolving its support programs for these facilities, the university has looked to NetWellness to fill the void. The richness of its resources makes NetWellness an ideal vehicle for providing remote access to comprehensive, high-quality consumer health information. The original health content and identification of quality Web links provide access to resources that these facilities would not be aware of otherwise. The very limited number of information-technology staff members in these facilities are totally dedicated to systems support and do not have time to identify information resources, which are so valuable in supporting patient care. These hospitals' health professionals can confidently recommend NetWellness to patients and their families.

Working with NetWellness staff at The Ohio State University, colleagues at the state Agricultural Extension have profiled NetWellness at national and local venues. District meetings and workshops feature NetWellness resources for improving health along with NetWellness curriculum guides for classroom use. Through county extension offices, 4-H agents, and the state Extension office, the rural agricultural community is integrally involved in ongoing NetWellness evaluation and improvement efforts.

To increase access for targeted populations with special health information needs, NetWellness has piloted the Minority Health Initiative and other projects affecting urban underserved users. Partially funded by the Health Foundation of Greater Cincinnati and the City of Cincinnati, the Minority Health Initiative is expanding NetWellness' coverage of minority health issues. The project has also placed five public-access computers in minority community locations in Greater Cincinnati. These computers are in addition to those in the Public Library of Cincinnati and Hamilton County system and the nearly twenty still-active sites from the original demonstration project across southern Ohio and Greater Cincinnati. This health initiative serves as a pilot for other targeted health initiatives, including women's health, children's health, senior health, and environmental health. Similar opportunities through the state's agricultural extension pro-

grams are a possibility. Health materials and information developed for effective use in such settings are readily adaptable for the Web.

Access to quality health information resources has proved to be as important an issue for underserved urban populations as it is for rural populations. The Case Western Reserve University School of Medicine has long-standing collaborative partnerships serving health-education and health-promotion needs of Cleveland's urban underserved communities. NetWellness provides an important addition to these efforts. This relationship has powerful mutual benefits. The site's attention to accessibility of information (e.g., reading level and clarity) as well as matters related to minority health, have made it an important resource for providers and residents alike. It is particularly effective as a complement to existing programs, including public school and community health promotion initiatives. Several community organizations, including the Cuyahoga Metropolitan Housing Authority and the Urban League, have designed projects to increase electronic capacity among community residents. These will further enhance the impact of NetWellness. These collaborative relationships hold significant promise to increase accessibility to health information for rural and urban populations alike and to make important contributions to effective content for the site. Experience and involvement between these community programs and the NetWellness team leads to more effective site and content development for all Ohio residents.

## HOW DOES NETWELLNESS SERVE ITS USERS?

NetWellness brings authority to consumers. While there are literally thousands of health-related Websites, the quality of the information they provide varies dramatically. NetWellness is a key member of the Health Summit Working Group for developing the Criteria for Assessing the Quality of Health Information on the Internet [5]. NetWellness has implemented use of the criteria as its standard for information created or approved for hot links by its experts. Health professions faculty from the three partner universities evaluate all materials posted to the site, including Web links to outside organizations. These experts serve as individual consultants and in teams. Teams can tap multiple health professions, disciplines, and institutions. To date, 200 experts have answered almost 11,000 questions.

These health professionals support more than fifty Ask an Expert areas, where visitors can anonymously ask questions of qualified health professionals and read a reply on the Website usually within two to three days. Previous questions and answers are completely indexed and fully searchable. Visitors can also simply browse through the lists of questions and an-



swers. More than eighty-five Health Topics provide various combinations of introductions, glossaries, frequently asked questions, original reports, Web links, and Ask an Expert services. The list of Ask an Expert and Health Topic areas grows constantly. For example, the Ohio Department of Health has funded a project to develop a health topic on osteoporosis. During the next year NetWellness expects to add Ask an Expert to another ten to twenty health topics.

Other services include Today's News, which indexes six commercial news sources for health news and provides easy searching for current topics; Referrals/Directories, which links to national and regional directories of health care professionals and the referral services of the three partner universities; Search; and Feedback. Visitors have three Search options: (1) NetWellness documents, Ask an Expert areas, and all Websites to which NetWellness links; (2) commercial proprietary databases, which will be included in the first search option at a later date; and (3) MEDLINE, either Internet Grateful Med or PubMed. Feedback can be posted through a convenient form appearing on the bottom of every content page, or through a separate Feedback option that is available from the left-hand menu on every NetWellness page.

Material for the Website is designed to be culturally sensitive, to be written at appropriate reading levels, and to keep jargon to a minimum and carefully explained. Because people search and learn differently, there are multiple paths through the content. Health Centers are a recently developed organizing feature that focus on health issues important to particular demographic groups.

Released in April 1999, the Minority Health Center serves as a prototype for the current software design, featuring an easier-to-use, flatter interface. The design goal for NetWellness is "one click to anything." Pop-out menus allow visitors to find and select important materials deeper in the Website structure with one mouse click, while maintaining logical and functional hierarchies. The Minority Health Center includes prevention and wellness information presented as healthy living tips, health topic focus areas, news and views, guest editorials, Web links, and Ask an Expert links. The initial focus is on African Americans. With necessary funding, this will be expanded to include other minorities, including Ohio's rural Appalachian population.

While consumers are NetWellness' audience, they are a diverse audience. Beside providing service directly to home, office, and public library users, NetWellness has been piloted as a curriculum aid in Ohio high schools. In the 1998/99 NetWellness School Demonstration Project, INFOhio made all of NetWellness, including the commercial databases, available to fourteen Ohio schools including six rural schools. The pilot schools used NetWellness for curricu-

ulum development, as a tool to enhance health education, and as a source of reliable and timely health information for educators, parents, and children. The fourteen schools were selected for the pilot based on their health-related curriculum, access to the Internet, or expressed willingness to participate in evaluating NetWellness' resources. Library or media center staff or technology coordinators at each school served as contact persons. NetWellness representatives visited most of the pilot schools and provided training in accessing NetWellness and using the resources contained in or linked to it. Each site received staff assessment surveys, designed by a nurse-educator who also served as a NetWellness expert in children's development and health.

Survey results and individual contacts in the schools have shown that librarians, media specialists, and teachers have received the INFOhio project and NetWellness enthusiastically. Currently, most do not have sufficient resources in their collections to support health information needs adequately. Pilot school staff see NetWellness as used best in vocational programs and courses on health, science, social science, home economics, human and family relations, parenting, sexual education, math (particularly statistics), computer literacy, art, and business. All feel NetWellness is a resource that they can incorporate into their current curricula or activities, and they like best NetWellness' user friendliness, ease of searching many resources, and timeliness and currency of information.

To meet the needs of its diverse audience, NetWellness uses a team approach to design and development. Members of the NetWellness development team meet every Friday morning to maintain close relationships and develop consensus solutions. The location of the three universities requires that some members participate via teleconferencing. A content coordinator leads the development and evaluation of content resources for the site. Expert coordinators at the three universities serve as recruiters, promoters, liaisons, and trainers for their respective faculty experts.

Evaluating Web-based information services presents challenges not faced by previous electronic information services. Each Web page request is a complete transaction unto itself. While this conserves bandwidth, it also makes it difficult to measure accurately the time a visitor spends on a given page or to tell when one visitor at a public workstation has finished, and a new visitor has started. To address these challenges, a team of University of Cincinnati evaluation experts from the Institute for Policy Research, the Institute for Nursing Research, the School of Planning, and the Center for Academic Technologies led an independent evaluation of NetWellness in 1996. A second evaluation followed in 1998. The evaluation identified four sources for data collection and analysis:

- raw log data from NetWellness servers, providing aggregate and demographic breakdowns of system usage, plus algorithmic analysis of these data for finer interpretation
- user-satisfaction survey data, providing indications of use patterns along with user preferences and approval ratings
- feedback from users, sent through the system (anonymously if desired), providing direct evidence of users' interests, needs, and assessments of NetWellness performance
- interviews with users, providing further direct user comments

The statewide expansion begun in 1997 has paid dividends in increased NetWellness penetration to key constituents. Comparing the 1998 survey to 1996, respondents' average family income level was lower (67% with average household income below \$45,000 versus 43% in 1996), and their education levels were also lower (44% with high school education or less versus 11%). In the 1998 survey, respondents represented thirty-nine of Ohio's eighty-eight counties. These data signal a clear expansion of NetWellness' primary audience to everyday people and beyond early technology adopters, yet a need to continue outreach.

## PROMOTION

NetWellness promotes key developments and events using various outlets, including paper, email, Web, and telephone. Promotions fall into several categories.

- *Announcements* target existing NetWellness users and supporters with notices of new content, for example. These announcements are posted on the site in the "What's New" feature and shared through email discussion lists of key constituents and with lists of contacts nationwide.
- *News releases* target existing users and NetWellness partner universities; local, state, and national media; and additional contacts and groups. For example, recent news releases have covered notices of new features, redesigns, and the matter of user privacy. These releases are distributed in collaboration with public relations offices at the three universities through established channels, as well as posted on the site and shared through email discussion lists and key distribution lists.
- *Promotion materials* feature key achievements and are integrated into a NetWellness informational packet that is distributed to potential partners and funders.

Recent promotional efforts focus on Ohio's public librarians as a key element in reaching citizens across the state and from all walks of life.

## TRAINING PROGRAMS

NetWellness is designed for ease of use with no training required. However, users can benefit from tips and

training designed to help them fully exploit the depth and breadth of available services and information. Ohio's library networks not only provide access and information, they facilitate the rapid deployment of technical training statewide. OPLIN and INFOhio have folded NetWellness into their overall training strategies. OPLIN's strategy includes

- train-the-trainer sessions for those involved in professional development for librarians
- formal hands-on classes for library staff members
- training of the general public by public librarians
- wide dissemination of updated information and tips to front-line library staff statewide

NetWellness staff worked with OPLIN's trainers initially to create content for the "NetWellness Overview" portion of OPLIN's Reference II class for library staff. The trainers were fully exposed to NetWellness design and content and received assistance with developing class work for library staff. The training providers held hands-on sessions at numerous sites throughout the state, averaging one per month during 1997 to 1999. All training took place in computer training labs to give staff members the chance to use the resources under the supervision of trainers. Through regional library networks, these programs reached all corners of the state, including the most rural.

The state's public libraries train the public in a variety of ways. The work of reference staff is, at its heart, a form of training. An information professional or librarian directs consumers to resources that have the needed information and coaches consumers about how best to retrieve the results they want. Library staff who have completed OPLIN's training programs are better prepared to assist consumers in this way. In addition, Ohio's public libraries have engaged in a massive program of educating the public, offering introductory and advanced classes on the Internet, uses of Web technology, and search techniques. These classes have ranged from the basics to more advanced topics. Some libraries have embarked on subject specific classes such as "Health Information on the Web." Others have presented "OPLIN Orientation" and covered NetWellness along with other topics.

OPLIN does not consider the job done when a staff member attends a single class. NetWellness utilizes OPLIN's information-dissemination channels (including the OPLIN Website, email discussion list, and board meeting minutes) to pump a continuous stream of usage information to the libraries, keeping them up to date and offering them an expanded understanding of the resources available.

INFOhio has focused its NetWellness training and education efforts on promoting NetWellness use in K-12 schools. INFOhio's Website and direct mailings throughout the year to Data Acquisition Sites (DASites)—clearinghouses established by the Ohio Education Computer Network—are key elements of this ef-

fort. Carrying on the train-the-trainer model for statewide training, INFOhio presentations at state meetings provide tips and informational training about NetWellness. The educators attending these meetings then return to their home districts, promoting NetWellness and training other district educators. DASites already provide INFOhio services and training to K-12 schools. INFOhio provides training to DASite staff, so they can in turn train librarians in their service area. INFOhio continues to promote NetWellness through paper and electronic mailings and provides informational training whenever possible.

NetWellness is also working with SchoolNet—a statewide effort to provide telecommunications and computing equipment for the “last mile” of connectivity in qualifying school districts—and INFOhio to develop instructional tools for teachers who will integrate NetWellness into their curricula. NetWellness has produced prototypes of Web-based instructional tools that demonstrate to teachers how to use NetWellness to meet national health education standards and Ohio proficiency-test standards. In the near future, these tools will be refined and disseminated, and teachers throughout the state will be trained in their use.

## THE FUTURE OF NETWELLNESS

NetWellness aims to fill a niche as portal to quality health information on the Web for Ohio residents. This goal is supported by several efforts.

- NetWellness has worked with OPLIN, OhioLINK, INFOhio, the State Library of Ohio, and SchoolNet to gain funding support for core health resources for all Ohio residents. The needs of public, academic, and school librarians and media specialists, as assessed by surveys through their statewide online discussion groups, and the analysis of experienced health sciences librarians guide selection efforts.

- Continued focus on content initiatives like the Minority Health Center and a proposed Environmental Health Center will provide operational support to develop complex health topics and enhance access to information that crosses disciplinary boundaries.

- Strategic partnerships and collaborations will continue to serve key roles in complementing the organization's existing resources and skills.

NetWellness constantly seeks to expand the breadth and depth of its content, adding new Ask an Expert, Health Topic, and Health Center areas based on the expressed needs of users. NetWellness has grown from offering a single Ask an Expert area in 1995 to offering more than fifty areas today. NetWellness experts have answered nearly 11,000 questions, virtually all of which are available for all NetWellness users to view (selected Ask an Expert areas archive older questions). As local public libraries, with OPLIN, establish dial-in services to their electronic collections, the entire

NetWellness collection will reach additional users directly in their homes. However, a recent study finds fifty-two of Ohio's eighty-eight counties are underserved by ISPs, and twenty-eight rural counties have no local dial-up ISPs whatsoever [6]. While some library systems may establish their own ISP services (the rural Preble County Public Library is a notable example), access to NetWellness through the libraries themselves will remain critical.

The potential for NetWellness use by Ohio's K-12 community is enormous. Teachers and librarians participating in INFOhio's NetWellness pilot (described above) identified a dozen classes NetWellness could complement. When the OSU NetWellness Expert Coordinator presented a train-the-trainer session on NetWellness services to more than 100 INFOhio librarians and media specialists in May 1999, all in attendance were impressed with the amount of information now available to any Ohio citizen. They agreed that the entire suite of services would be an invaluable addition to Ohio's K-12 schools. Following this training session, participants have begun introducing the NetWellness site to educators and students in their home districts. Through INFOhio, NetWellness could reach 4,679 public and non-public school buildings serving more than two million students.

In a related effort, NetWellness surveyed Ohio school nurses in spring 1999, asking them to identify health areas of greatest concern to their schools and where they felt they needed additional information resources. Their responses will help guide the development of additional health topics.

INFOhio seeks to obtain funding for resources to support all areas of curriculum and instruction. Obtaining funding to provide NetWellness for all schools and helping to improve health instruction for Ohio's elementary and secondary students are INFOhio priorities. Funds and resources to provide necessary and quality-supporting materials for education are often inadequate. NetWellness provides Ohio's educators and students with quality health information necessary for learning today and tomorrow.

While the explosion of health Websites has created diversity in quality and substance of content, virtually all of them are written for adults by adults. The NetWellness academic partnership among University of Cincinnati, The Ohio State University, and Case Western Reserve University have recognized the adult focus of Web information. At the same time, these universities share the common institutional goal of strengthening working relationships with secondary-education institutions. NetWellness is the ideal vehicle to achieve this goal by addressing the health information needs of younger visitors. High school students have designed and developed *Teens-Look@Health*™ with appropriate review by health professionals from the academic partners. Recent ex-

amples of their work include a virtual magnetic resonance imaging tour, which takes children and teenagers on an electronic tour of this radiological procedure, and a hyperstudio depiction of human cardiovascular functions, which provides a detailed audiovisual interactive demonstration of heart, artery, and vein functions. Other modules under review cover diverse topics from teen pregnancy, postponing sexual involvement, and sexually transmitted diseases to fitness and sports-related injuries, hearing and sound, germs and illness, and liver diseases.

The images and explanatory material in TeensLook@Health modules are designed to capture teenagers' interest and directly relate to material in their high school science curricula. The close working relationship the high school students enjoy with medical school students, to ensure the accuracy of their content, is an added benefit to the academic institutions' involvement. An ongoing NetWellness goal is to replicate the success of TeensLook@Health in other schools in the state, expanding content to support high school curricula significantly, as well as to benefit the personal health of teens everywhere. A significant benefit of the NetWellness TeensLook@Health approach is that there are no geographic boundaries to content development. With access to basic computers and software, this experience can be replicated in both urban and rural settings.

## CONCLUSION

In moving from an information service to an interactive knowledge service, NetWellness will seek to expand into partnerships with state information programs in agriculture, health, and education to reach even more of Ohio's citizens. To reach all citizens of a state, including even the most remote rural residents, there must be a confluence of energies, resources, commitments, and talents in public networks, library consortia, and major health centers. Ohio has a unique

environment for reaching all its citizens, even those in the most remote rural areas. The state has a history of library support at state and local levels and a literate population. A long history of library cooperation and strong collaborations and strong governmental support at legislative and gubernatorial levels, provide a climate in which library networks thrive, and NetWellness can achieve its ultimate goal of improving the health of all Ohio residents.

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*Received January 2000; accepted April 2000*